Prevent Blindness America estimates that nearly 14-million US citizens have some degree of ARMD. However, the regular use of eye-specific carotenoids such as lutein and zeaxanthin may help decrease the risk of developing this insidious malady.

What are lutein and zeaxanthin?
Lutein and zeaxanthin are two types of closely related carotenoids found in a variety of food including kale, spinach, broccoli, kiwi fruit, grapes, and summer squash. Supplemental forms of these unique compounds are usually derived from a specific type of marigold flower. The two carotenoids are often linked together as scientists suspect that lutein is converted to zeaxanthin in the retina of the eye.

Lutein and zeaxanthin are found together as yellow pigments in the macular region of the retina. The macula is the central part of the retina that is responsible for small visual details. Researchers believe lutein and zeaxanthin protect the retina by acting as potent antioxidants, absorbing the damaging effects of blue wavelength light from the sun thereby minimizing photooxidative injury.

Treatment of ARMD
Several studies have determined that supplementing with lutein and zeaxanthin increases the density of the macular pigment. However, until recently, no controlled clinical study had confirmed if the additional use of these carotenoids decreased the progression of active ARMD. A 2004 study published in Optometry by Dr. S. Richer and associates, entitled “The Lutein Antioxidant Supplementation Trial (LAST),” concluded that lutein does indeed have remarkable eye benefits.

Ninety male veterans (average age 74 years) with AMRD were randomly divided into three treatment groups: 10-mg lutein per day, 10-mg lutein plus antioxidants, or placebo for one year. Those who employed the active treatments reported better visual function with rapid glare recovery, better contrast sensitivity, and improved visual acuity. Interestingly enough, those individuals who combined antioxidants and lutein had even better contrast sensitivity than the lutein group alone.
"Thirty percent of people over 75 have age-related macular degeneration (ARMD) and a further 23 percent will develop ARMD by age 80."

Lutein and zeaxanthin are carotenoids found in a variety of food including grapes and kiwi fruit.

The right dose?
People who are at potential risk of or who have ARMD should employ a pure lutein and zeaxanthin supplement at a dose of 10 mg per day. In addition, the regular consumption of dark green leafy vegetables such as spinach and kale are strongly recommended. Olestra™, a commonly utilized fat substitute, is known to lower blood lutein levels and should be avoided by those with ARMD.

Who is at risk?
One study, "Exploring the Role of Antioxidants in Preventing ARMD," conducted in 1999 by Dr. S.D. Cantrell and Dr. R.L. Ausich and published in Optometry Today, noted that 30 percent of people over 75 have ARMD and a further 23 percent will develop ARMD by age 80.

Despite these grim statistics, natural products such as lutein and zeaxanthin may help prevent older people from succumbing to this increasingly common eye condition.

Ronald G. Reichert, ND, is a naturopathic doctor practising in Vancouver, BC.